

WE CLAIM:

1. A power control device comprising an electric power storage device provided across a power supply line for a load and including an electric double layer capacitor (EDLC) bank including a plurality of parallel-connected rows of EDLC unit cells, each of which rows includes a plurality of series-connected EDLC unit cells.

2. A power control device according to claim 1, wherein the electric power storage device includes at least one EDLC bank and a secondary battery combined with the EDLC bank.

3. A power control device according to claim 1, wherein the electric power storage device includes at least one EDLC bank and an aluminum solid electrolytic capacitor combined with the EDLC bank.

4. A power control device according to claim 1, wherein the electric power storage device includes at least one EDLC bank, an aluminum solid electrolytic capacitor and a secondary battery, the latter two of which are combined with the EDLC bank.

5. A power control device according to claim 1, wherein each EDLC unit cell has an internal resistance which is at or below 2 m Ω and a product of an electrostatic capacity of each EDLC unit cell by the internal resistance thereof is at or below 4 Ω F.

6. A power control device according to claim 2, wherein each EDLC unit cell has an internal resistance which is at or below 2 m Ω and a product of an electrostatic capacity of each EDLC unit cell by the internal resistance thereof is at or below 4 Ω F.

7. A power control device according to claim 3, wherein each EDLC unit cell has an internal resistance which is at or below 2 m Ω and a product of an electrostatic capacity of each EDLC unit cell by the internal resistance thereof is at or below 4 Ω F.

8. A power control device according to claim 4, wherein each EDLC unit cell has an internal resistance which is at or below 2 m Ω and a product of an electrostatic capacity of each EDLC unit cell by the internal resistance thereof is at or below 4 Ω F.

9. A power control device according to claim 1, wherein when the EDLC bank is used for a primary purpose of electric power storage, each EDLC unit cell has an internal resistance which is at or below 10 m Ω and a product of an electrostatic capacity of each EDLC unit cell by the internal resistance thereof is at or below 100 Ω F.

10. A power control device according to claim 2, wherein when the EDLC bank is used for a primary purpose of electric power storage, each EDLC unit cell has an internal resistance which

is at or below $10\text{ m}\Omega$ and a product of an electrostatic capacity of each EDLC unit cell by the internal resistance thereof is at or below $100\text{ }\Omega\text{F}$.

5 11. A power control device according to claim 3, wherein
when the EDLC bank is used for a primary purpose of electric power
storage, each EDLC unit cell has an internal resistance which
is at or below $10\text{ m}\Omega$ and a product of an electrostatic capacity
of each EDLC unit cell by the internal resistance thereof is at
10 or below $100\text{ }\Omega\text{F}$.

12. A power control device according to claim 4, wherein
when the EDLC bank is used for a primary purpose of electric power
storage, each EDLC unit cell has an internal resistance which
15 is at or below $10\text{ m}\Omega$ and a product of an electrostatic capacity
of each EDLC unit cell by the internal resistance thereof is at
or below $100\text{ }\Omega\text{F}$.

13. A power control device according to claim 1, wherein
20 a condition expressed by $Y > 100 \times X^{-0.8}$ is met where Y designates
an energy density of each EDLC unit cell in Wh/kg and X designates
an output density of each EDLC unit cell in W/kg.

14. A power control device according to claim 2, wherein
25 a condition expressed by $Y > 100 \times X^{-0.8}$ is met where Y designates
an energy density of each EDLC unit cell in Wh/kg and X designates
an output density of each EDLC unit cell in W/kg.

15. A power control device according to claim 3, wherein a condition expressed by $Y > 100 \times X^{-0.8}$ is met where Y designates an energy density of each EDLC unit cell in Wh/kg and X designates an output density of each EDLC unit cell in W/kg.

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16. A power control device according to claim 4, wherein a condition expressed by $Y > 100 \times X^{-0.8}$ is met where Y designates an energy density of each EDLC unit cell in Wh/kg and X designates an output density of each EDLC unit cell in W/kg.

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17. A power control device according to claim 2, wherein the electric power storage device includes at least one secondary battery having an energy density which is at or above 10 Wh/kg.

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18. A power control device according to claim 4, wherein the electric power storage device includes at least one secondary battery having an energy density which is at or above 10 Wh/kg.

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19. A power control device according to claim 3, wherein the electric power storage device includes at least one aluminum solid electrolytic capacitor having an output density which is at or above 10,000 W/kg.

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20. A power control device according to claim 4, wherein the electric power storage device includes at least one aluminum solid electrolytic capacitor having an output density which is at or above 10,000 W/kg.